

# 23 Network Utility Operations

## 23.1 Significant Issues

Network utilities are essential services to the community, and often their choice of location is restricted by Operational requirements.

Network utility operations have the potential to create adverse environmental [effects](#), particularly on visual amenity and the natural character of the [environment](#). The inappropriate installation, siting, design, operation, maintenance and minor upgrading of network utility operations has the potential to adversely affect the health and safety of people and communities.

Network utility operations may pose a potential risk to the health and safety of people and communities.

Other activities, including the location of [buildings](#), [major structures](#) and/or plantings in close proximity to existing network utility operations, have the potential to compromise the efficient development, use and maintenance of those utility operations.

## 23.2 Overview

Network utility operators provide a variety of essential services to the community including airports, railways, [roads](#), electricity, [radio-communication](#), [telecommunication](#) and meteorological services, [water](#), [wastewater](#) disposal, drainage, and gas supply and reticulation. Due to their essential nature, sufficient provision needs to be made for the efficient operation, maintenance and upgrading of existing network utilities, and for the establishment of new services as required. The Second Schedule of the Resource Management [Act](#) 1991 specifically mentions the scale, sequence, timing and relative priority of public works, goods and services, including public utility networks, as matters to be provided for in District plans. The Resource Management [Act](#) 1991 also provides for [land](#) to be designated by an approved authority for network utility purposes.

Many network utilities are able to be placed underground and their [effect](#) on the [environment](#) may be no more than minor. However, other network utilities have significant potential to adversely affect the [environment](#) and/or the health and safety of people and communities. These [effects](#) need to be addressed through the provisions of the District Plan, and various Objectives, Policies and Methods have been adopted to ensure the sustainable management of these resources and the control of possible adverse environmental [effects](#).

At the same time, neighbouring [land](#) uses and development have the potential to adversely affect the operation, maintenance and minor upgrading of existing and proposed network utility operations. The management of the [effects](#) of neighbouring activities is therefore also addressed through the provisions of the Plan. For example, buffer distances can be used to control the encroachment of activities where network utilities are already established. This can reduce the potential for conflict and ensure [access](#) for operational and maintenance purposes.

Many network utilities occur throughout the District and may also cross local body boundaries. It is desirable, therefore, to maintain consistency, wherever possible, for the provision of network utility operations throughout the District and across

# 23 Network Utility Operations

local body boundaries. At the same time, different parts of the District exhibit different natural characteristics and possess different amenity values. Living areas and areas of high recreational, landscape, ecological, cultural or heritage values are most affected by the impacts, particularly the visual impacts, from utility structures. These need to be taken into account, when providing for the installation, operation and maintenance of network utility operations.

## 23.3 Objectives

### 23.3.1

The orderly, efficient and effective installation, operation, maintenance and minor upgrading of network utility operations throughout the District, to enable people and communities to provide for their social, economic and cultural well-being and for their health and safety.

### 23.3.2

The protection of the environment from, as far as practicable, from the potential adverse effects of network utility operations, particularly effects on the health and safety of communities, the natural character of the environment, sites of historical and cultural significance, and the amenity values of the surrounding area.

### 23.3.3

The protection of network utility operations from the adverse effects of adjacent land use and development.

*Explanation and Reasons: Network utility operations are essential to the well-being of people and communities but have the potential to adversely affect the environment. At the same time neighbouring land uses can adversely affect the installation, operation, maintenance and minor upgrading of utility operations. The objectives of the Plan are to enable the orderly and efficient provision of network utility operations whilst avoiding, remedying or mitigating adverse effects on the environment and the community.*

## 23.4 Policies

### 23.4.1 Provision of Services

The orderly and efficient provision of network utility operations should be enabled, and the essential nature and operational needs of network utility operations should be taken in to account, when assessing the location, design and operation of these services.

*Explanation and Reasons: The siting of utility operations may be influenced by operational needs that limit the choice of suitable locations.*

# 23 Network Utility Operations

*For example, facilities such as cellular communications need to be located throughout the District in order to adequately serve residential as well as commercial and other users. The provision of high voltage power distribution will also, in some cases, be unavoidable in built up areas. Accordingly, the Plan does not preclude such facilities, but will require account to be taken of location and design so as to avoid significant effects on the environment and the community.*

## 23.4.2 Environmental Effects

Network utility operations should be sited, designed and operated in such a way that the adverse effects on the environment will be avoided, remediated or mitigated, as far as practicable. When siting and designing network utility facilities, particular regard should be made to :

- Areas of Outstanding Landscape value;
- Outstanding Natural Features
- Significant Ecological Areas;
- The natural character of the coastal environment;
- Ridgelines and skylines;
- Heritage Buildings, Sites and Objects;
- Sites of Significance to Māori.

*Explanation and Reasons: Network utility operations provide important services throughout the District, enabling people and communities to provide for their social, economic and cultural well-being. The location of network utility facilities can adversely affect the natural character of the environment, particularly in Outstanding Landscape Areas, Outstanding Natural Features, Significant Ecological Areas and in the Coastal Area. To avoid, remedy or mitigate such effects network utility facilities should be sited in visually unobtrusive locations, wherever possible. Furthermore, mitigating measures should as far as reasonably practicable be appropriate to the environment in which they are located. Operational requirements often necessitate the siting of facilities on ridgelines or skylines, which can potentially result in adverse visual effects. Heritage Buildings, Sites and Objects and Sites of Significance to Māori are also sensitive to the adverse effects from network utility operations. Care should be exercised when siting facilities near these areas.*

## 23.4.3 Amenity Values

The adverse effects of network utility operations should be avoided, remedied or mitigated as far as reasonably practicable in accordance with the amenity values of the different Zones. In the Residential Zones, the Rural Village Zone, the Strategic Rural Industries Zone, the commercial centres and in the Open Space and Recreation Zones, telecommunication and electrical services should be underground or by wireless link, where practicable. In other environments, undergrounding or wireless links should be encouraged, but where this is not

# 23 Network Utility Operations

practicable, feasible services should be sited and designed so as to minimise adverse effects on amenity values.

*Explanation and Reasons: Network utility operations can significantly affect the amenity of an area, particularly in the Residential Zones, the Rural Village Zone, the Strategic Rural Industries Zone, the commercial centres and in the Open Space and Recreation Zones. Above-ground structures can reduce visual amenity, where inappropriately sited or designed, while sewage treatment plants can produce offensive odours.*

*Noise, effects on traffic, dust and vibration are other possible amenity effects. Such facilities should be sites in visually non-obtrusive locations and levels of mitigation should be appropriate for the Zone in which they are located. Many network utilities are able to be sited underground and, in the case of telecommunications, new technology may allow the service to be provided by a wireless link. Both these options provide an*

*effective method for avoiding visual effects and should be encouraged, where practicable. However, it is recognised that it is not practicable to underground some network utilities.*

## 23.4.4 Health and Safety

Network utility operations should be installed, sited, designed, operated, maintained and upgraded in compliance with the relevant (national, international or industry) standards, codes of practice or guidelines in order to avoid, remedy or mitigate potential adverse effects on the health and safety of people.

*Explanation and Reasons: The installation, operation and maintenance of some network utility operations carries potential risks to the health, safety and well-being of people and communities. For example, there is a risk of electrocution and risk of injury or damage to property should an overhead power line fall. There is also a need to safeguard the community from the risks associated with pipelines that distribute hazardous substances such as gas or petroleum products.*

## 23.4.5 Radio Frequency Fields (RF) and Electromagnetic Radiation (EMR)

To ensure that any effects from the generation of Radio Frequency Fields and Electromagnetic Radiation are in accordance with the relevant New Zealand Standard.

*Explanation and Reasons: Certain utilities and other activities emit electromagnetic radiation, which may have a potential health effect on some people living near them if they exceed an acceptable public level of exposure (as defined by the relevant New Zealand Standard). Radio Frequency Fields (RF) are produced by activities involving radio wave transmissions at frequencies of 3kHz to 300GHz such as broadcasting, mobile phone base station and microwave transmission activities. It is the antennae used for sending the signal that produces the Electromagnetic Radiation (EMR). An acceptable public level of*

# 23 Network Utility Operations

*exposure to EMR is established in the relevant New Zealand Standard, which has been thoroughly researched and based upon scientific evidence.*

## 23.4.6 Encroachment

Subdivision, use and development of land should not compromise the safe and efficient operation of, and access to, existing and proposed network utility operations.

*Explanation and Reasons: An increase in development, under or alongside an existing network utility facility, is known as encroachment. Encroachment can affect access to, and the ongoing operation and maintenance of, network utility operations. This concept is increasingly being referred to as “reverse sensitivity”, where adjoining and/or sensitive activities have the potential to adversely affect network utility operations by impacting on their legitimate right to operate.*

*It can also constrain future relocation and/or undergrounding options. In addition, encroachment has the potential result of increased risks to the health and safety of people. By controlling encroachment, these conflicts can be avoided, remedied or mitigated.*

## 23.5 Methods

### 23.5.1 Regulatory Methods

- Identify different Zones on the Planning Maps (Policy 23.4.6).
- Formulate Zone rules relating to the location, type and effects of activities (Policies 23.4.4 & 23.4.6).
- Identify Resource Areas on the Planning Maps (Policy 23.4.2).
- Formulate Resource Area rules relating to the location, type and effects of activities (Policies 23.4.1 to 23.4.6).
- Formulate Subdivision rules relating to the location, size and layout of allotments (Policy 23.4.6).
- Have regard to relevant objectives, policies and rules in other sections of the Plan (Policies 23.4.1 to 23.4.6).
- Attach conditions to resource consents relating to network utility operations (Policies 23.4.1 to 23.4.6).
- Requiring Authorities may designate the land for network utility purposes (Policy 23.4.2).

# 23 Network Utility Operations

## 23.5.2 Other Plans and Legislation

- Ensure that plans and management strategies are not inconsistent with the New Zealand Coastal Policy Statement, the Regional Policy Statement for Northland and any relevant regional plans (Policies 23.4.1 to 23.4.6).
- Take into account the relevant provisions in the Local Government Acts 1974 and 2002, Transit New Zealand Act 1986, the Building Act 2004, the Electricity Act 1992, the Gas Act 1992, the Health Act 1956, the Telecommunications (Residual Provisions) Act 1987 and the Telecommunications Act 2001, the Land Drainage Act 1908 and any other relevant legislation (Policies 23.4.1 to 23.4.6).
- Have regard to reserve management plans formulated under the Reserves Act 1977 (Policies 23.4.1 to 23.4.6).
- Take into consideration any relevant Iwi/Hapū Environmental Management Plans (Policy 23.4.4).

## 23.5.3 Information, Education and Advocacy

- Liaise with network utility operators (for example: Transit New Zealand, Transpower, Telecom New Zealand Ltd) over the siting and operation of network utility operations (Policies 23.4.1 to 23.4.6).
- Liaise with the Northland Regional Council and adjacent territorial authorities in regard to any potential cross boundary issues relating to network utility operations (Policies 23.1.1 to 23.4.6).
- Liaise with iwi/hapū in regard to the potential development of Iwi/Hapū Environmental Management Plans and issues of concern to tangata whenua relating to network utility operations (Policies 23.4.1 to 23.4.6).
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- Liaise with other organisations with specific resource management and/or environmental concerns in the District, for example, the Department of Conservation, Heritage New Zealand Pouhere Taonga, Ministry of Agriculture and Forestry (Policies 23.4.1 to 23.4.6)
- Educate and inform both network utility operators and the public about issues relating to the provision of network utility operations (Policies 23.4.1 to 23.4.6).
- Promote the use of appropriate codes of practice, standards and guidelines (national, international and industry) (Policies 23.4.1 to 23.4.6).

## 23.5.4 Economic Instruments

- Receive financial contributions as prescribed in Chapter 59 of the Plan (Policy 23.4.1).

## 23.5.5 Council Works and Services

- Undertake appropriate works and services relating to roads, water supply, wastewater and storm water disposal, and any other relevant functions (Policies 23.4.1 to 23.4.6).

# 23 Network Utility Operations

## 23.5.6 Anticipated Environmental Results

The following results are expected to be achieved by the foregoing Objectives, Policies and Methods. The means of monitoring whether the Plan achieves the expected outcomes are set out in the Whangārei District Council Monitoring Strategy.

- The orderly, efficient and effective provision of network utility operations to the District's communities.
- The protection of natural, cultural and [historic heritage](#) from adverse [effects](#) of network utility operations.
- [Amenity values](#) in the different Zones are not adversely affected by network utility operations.
- People and communities do not suffer adverse [effects](#) on their health and safety from network utility operations.

Network utility operations are not adversely affected by encroachment from neighbouring activities that are sensitive to the operation of network utility facilities.